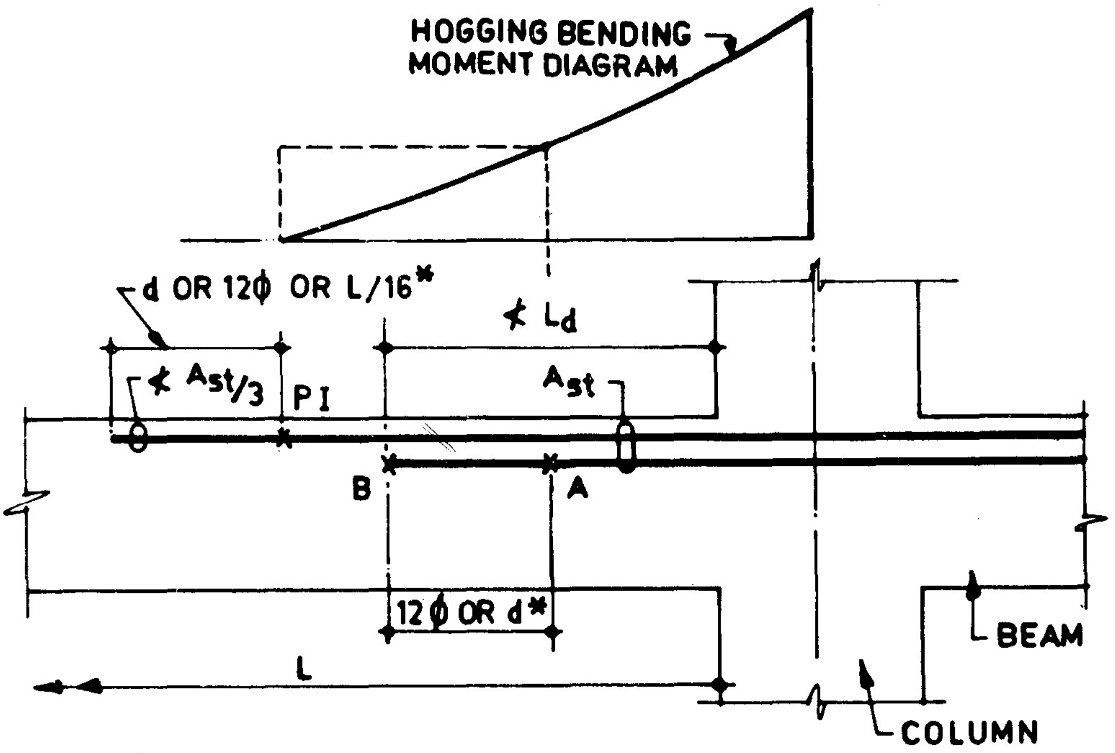
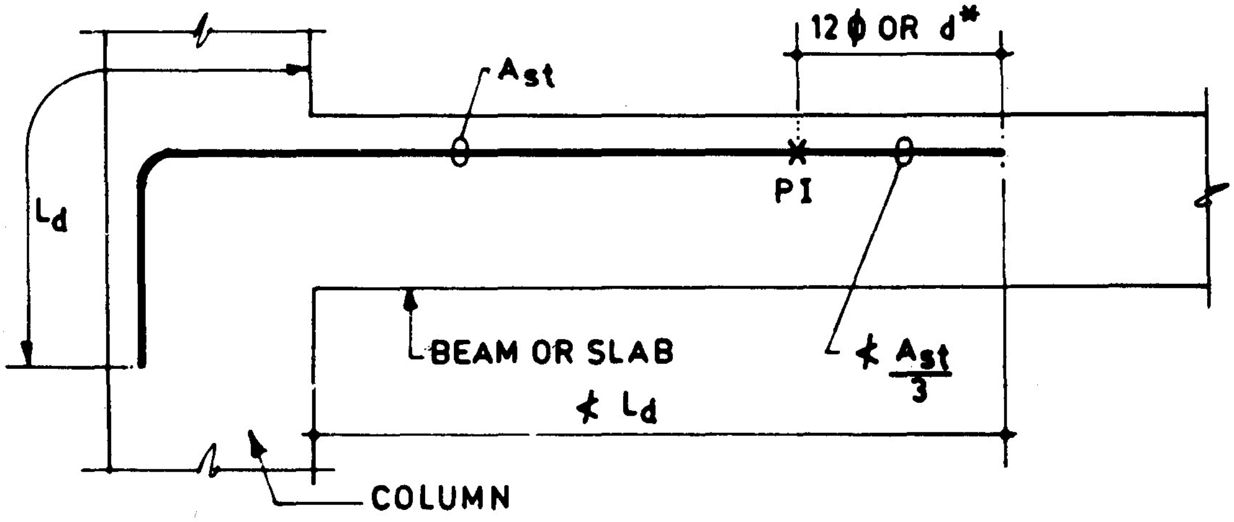


*whichever is greater
A is theoritical cut-off point at which certain amount of reinforcement is no longer required
B is actual cut-off point
PI is point of infection

FIG. 4.20 TENSILE DEVELOPMENT LENGTH FOR NEGATIVE MOMENT AT CONTINUOUS EDGE



*Whichever is greater

FIG. 4.21 TENSILE DEVELOPMENT LENGTHS FOR POSITIVE MOMENT STEEL AT DISCONTINUOUS ENDS

be treated as a single bar of diameter derived from the total equivalent area (*see* Table 4.6). However, the cover provided should be measured from the actual outside contour of the bundle.

NOTE 1 — Unless patented splices are used, the bundling of bars in columns is not recommended, as all joints have to be staggered. However, even when patented splices are used the necessary staggering of splices makes assembly difficult and prefabrication cumbursome.

NOTE 2 — It is recommended to limit the bundle only to two bars or three bars as four bars many times do not tie into a stable bundle.

4.8.2 *Development Length* — L_d of each bar of bundled bars shall be that for the individual bar, increased by 10 percent for two bars in contact, 20 percent for three bars in contact and 33 percent for four bars in contact. The